Dong Heon Han

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Robotics Department, University of Michigan, Ann Arbor, MI 48109, USA
Robot Collectives | Artificial Intelligence | Soft Robotics | Microrobotics

EDUCATION

• **University of Michigan – Ann Arbor** — *2029*
PhD in Robotics | Advisor: Dr. Steven Ceron — Ann Arbor, MI

• **University of Michigan – Ann Arbor** — *2025*
MS in Mechanical Engineering | Control and Mechatronics — Ann Arbor, MI

• **Georgia Institute of Technology** — *2021*
BS in Mechanical Engineering | High Honor — Atlanta, GA

EXPERIENCE

• **Universiy of Michigan | Robotics Department** — *May 2025 - Present*
Research Assistant — Ann Arbor, MI

• **Universiy of Michigan | Mechanical Engineering Department** — *Aug 2023 - May 2025*
Research Assistant — Ann Arbor, MI

• **Republic of Korea Army** — *Jan 2022 - July 2023*
Signal Specialist — Korea

• **Seoul National University | Biosystems Engineering Department** — *Aug 2021 - Dec 2021*
Research Assistant — Seoul, Korea

• **George W. Woodruff School of Mechanical Engineering** — *Aug 2019 - Aug 2021*
Research Assistant — Atlanta, GA

• **Korean Institute of Machinery and Materials** — *Jun 2018 - Aug 2018*
Research Assistant — Daejeon, Korea

PATENTS AND PUBLICATIONS
C=Conference, J=Journal, P=Patent, S=In Submission, T=Thesis

[C.1] **D.H. Han**, M. Mehta, R. Zuo, Z. Wanger, and D. Bruder. "An Enhanced Proprioceptive Method for Soft Robots Integrating Bend Sensor and IMU", 2025 IEEE International Conference on Robotics and Automation (ICRA)

[C.2] R. Zuo, M. Mehta, **D.H. Han**, D. Bruder. "Embedded Valves for Distributed Control of Soft Pneumatic Actuators". 2024 IEEE International Conference on Intelligent Robots and Systems (IROS)

[C.3] **D.H. Han**, S.J. Byeon, K.D. Kim, G.H. Han, M.H. Cha, Y.J. Park. "Development of Path Tracking Control Algorithm for Tractor Autonomous Driving". 2021 Korean Society for Agricultural Machinery Conference

[P.1] **Blowers With Variable Nozzles**. US 11668311 B2. Issued June 6, 2023.

[T.1] **D.H. Han**. "Towards a universal sensing framework for soft robots" 2025

[S.1] **D.H. Han**, D. Bruder. "Shape-Morphing Strain Sensing Structure for Enhanced Proprioception in Soft and Wearable Robots"

[S.2] **D.H. Han**, X. Huang. "Optimized Shape Morphing and Adaptive Locomotion Control in Centimeter-Scale Untethered Soft Robots"

HONORS AND AWARDS

• **VIP Innovation Competition, 1st Place in Hardware, Devices & Robotics Track** — *Apr 2021*
Georgia Institute of Technology
  ◦ Awarded to the most innovative and active research team in Georgia Tech

• **President's Undergraduate Research Award** — *Oct 2020*
Georgia Institute of Technology
  ◦ Research excellence scholarship as an undergraduate researcher at Georgia Tech

• **Georgia Korean American Grocers Association Scholarship Award** — *Dec 2016*
KAGRO
  ◦ Awarded for academic excellence and leadership in community service

• **Kappa Mu Epsilon** — *May 2018*
Mathematics honor society

SERVICE

- **Reviewer**
  - IEEE Transactions on Mechatronics
  - IEEE Robotics and Automation Letters
  - IEEE International Conference on Robotics and Automation (ICRA)
  - IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

REFERENCES

1. **Dr. Steven Ceron**
   Assistant Professor, Robotics Department
   University of Michigan – Ann Arbor
   Email: sceron@umich.edu
   Relationship: Advisor | PhD

2. **Dr. Daniel Bruder**
   Assistant Professor, Mechanical Engineering Department
   University of Michigan – Ann Arbor
   Email: bruderd@umich.edu
   Relationship: Advisor | MS

3. **Dr. Ye Zhao**
   Assistant Professor, George W. Woodruff School of Mechanical Engineering
   Georgia Institute of Technology
   Email: ye.zhao@me.gatech.edu
   Relationship: Advisor | BS